

Minerals ▪ *Guided Reading and Study*

Properties of Minerals

This section explains what minerals are and how they can be identified.

Use Target Reading Skills

As you read about properties of minerals, use the headings to complete the outline below.

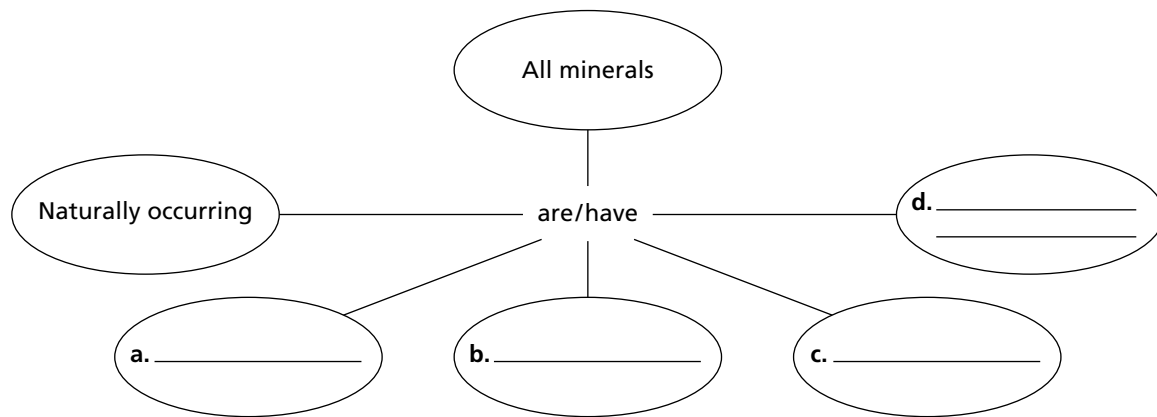
Properties of Minerals
I. What Is a Mineral?
A. Naturally Occurring
B. Inorganic
C. _____
D. _____
E. _____
II. Identifying Materials
A. Color
B. _____
C. _____
D. Density
E. _____
F. _____
G. _____
H. Special Properties

What Is a Mineral?

1. Because minerals are formed by processes that occur in the natural world, they are said to be _____.
2. Complete the concept map that shows characteristics of minerals.

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Properties of Minerals *(continued)*



- e. Use the concept map to write a definition of a mineral in your own words. You may use more than one sentence.

3. Because minerals do not come from living things, they are said to be _____.
4. A substance that keeps its shape because its particles can't flow freely is a(n) _____.
5. A solid with flat sides that meet at sharp edges and corners is called a(n) _____.

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6. Is the following sentence true or false? A mineral always contains certain elements in definite proportions. _____
7. Is the following sentence true or false? Very few minerals are compounds. _____
8. A substance formed when two or more elements combine and lose their distinct properties is a(n) _____.
9. In what two ways can elements occur in nature?

10. What are some examples of minerals that occur as elements instead of compounds? _____

Identifying Minerals

11. Is the following sentence true or false? Geologists have identified about 300 minerals. _____
12. Is the following sentence true or false? Each mineral has its own specific properties. _____
13. Why can't color alone be used to identify most minerals?

14. The color of a mineral's powder is its _____.
15. The term that describes how a mineral reflects light from its surface is _____.
16. Is the following sentence true or false? Minerals containing metals often have a shiny luster. _____
17. Circle the letter of each sentence that is true about the density of a mineral.
 - a. A given mineral can have varying densities.
 - b. The larger the sample of a mineral, the greater its density.
 - c. Each mineral has a characteristic density.
 - d. The density of a mineral is its mass divided by its volume.

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Properties of Minerals *(continued)*

18. What is the Mohs hardness scale? _____

19. The softest known mineral is _____. The hardest known mineral is _____.

20. Is the following sentence true or false? A mineral can scratch any mineral harder than itself. _____

21. Is the following sentence true or false? Each piece of a mineral has the same crystal structure. _____

22. How do geologists classify crystal structures? _____

Match the term with its definition.

Term

- ____ 23. cleavage
____ 24. fracture
____ 25. fluorescence

Definition

- a. A mineral's ability to split easily along flat surfaces
b. A mineral's ability to glow under ultraviolet light
c. The way a mineral looks when it breaks